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File Code: 3420 **Date:** June 20, 2007
Route To:

Subject: Biomass Project in La Cueva Fuelbreak

To: Forest Supervisor, Santa Fe National Forest

On June 19, Ken Reese (Pecos Ranger District) and Dave Conklin of our staff met to examine portions of the La Cueva fuelbreak area. Their main objective was to select appropriate stands for a project that would meet a forest health improvement objective while also generating material that can be utilized by a biomass plant. They also examined several recently treated stands, including an FY 2006 Forest Health–funded project area (see our 3420 letter of Sept. 23, 2005). The fuelbreak, located along Forest Road 375 northwest of Pecos, consists of several designated blocks, each 150 to 250 acres in size, transitioning from piñon-juniper at the lower end to mixed conifer at the upper end.

Block A (upper end of fuelbreak) contains a good mix of Douglas-fir, white fir, and ponderosa pine; southwestern white pine and aspen are minor components. Except for some selective logging decades ago, this area has never been thinned. Average densities exceed 1000 stems/acre. Two portions of this block, totaling 110 acres, have already been prepared and marked for a commercial timber sale. These generally encompass the more productive portions of the block, and have average basal areas of about 130 ft^2/acre. These areas are very good candidates for treatment, and could certainly be included as part of a biomass-generating project (separation of sawtimber and biomass components could be considered). Although clearly converting to shade-tolerant species, ponderosa pine is still a major overstory component here. Planned treatment would reduce average basal area to 50-60 ft^2, which (along with selection of leave trees) should favor the pine and help reverse succession. Dwarf mistletoe infection is light to moderate in both the pine and Douglas-fir and can be effectively managed through selective harvest and thinning.

Most of the remainder of Block A is less productive; moreover, much of it has severe pine dwarf mistletoe infection. Although thinning could potentially be beneficial from a fuels reduction standpoint, it would likely hasten conversion to fir. Thinning here would also generate large amounts of small-diameter slash, with relatively little material suitable for biomass.

Block B is mostly ponderosa pine, with significant amounts of Douglas-fir and white fir in some areas. Stands here are mostly second-growth (80 to 90 year old and younger). Most of this area was thinned about 25 years ago; basal areas generally range from 80 to 120 ft^2. Ponderosa pine dwarf mistletoe occurs in scattered infection centers and is moderate overall. About 30 acres of this block were included as part of the FY 2006 project and have been successfully treated according to prescription. The remainder of the block—approximately 130 acres—would be suitable for the biomass project. Treatment should retain the best dominant and codominant

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trees on an irregular spacing, with residual basal areas of 40 to 50 ft^2. Leave-tree marking would help ensure quality results.

Treatments have already been completed throughout **Block C**; these include a 70 acre portion of our FY 2006 project. We are especially pleased with the results of the prescribed burning accomplished following mechanical thinning: enough scorch was generated to provide some additional reduction in mistletoe infection, while minimizing mortality among the leave trees. **Block D and E**, although still untreated, were not examined closely for the biomass project. These are predominantly piñon-juniper type (especially Block E), and seem more suitable as sources of firewood for local residents than biomass.

Conclusion. Portions of Blocks A (110 acres) and B (130 acres), as described above, appear to be the most suitable areas for the biomass project. Treatment of these areas would meet our insect and disease objectives via reduction in average dwarf mistletoe severity and bark beetle susceptibility. Please contact Dave Conklin at (505) 842-3288 if you have questions about this evaluation. For questions regarding the biomass utilization aspects of the project, please contract Jerry Payne, Regional Biomass Energy Specialist at (505) 842-3165.

/s/ Debra Allen-Reid
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